

CLAIMS

What is claimed is:

1. A clamp/panel assembly, comprising:

a panel assembly comprising a plurality of interconnected panels comprising a plurality of base sections and a plurality of ribs, wherein said plurality of base sections comprises first and second base sections, wherein said plurality of ribs are disposed in spaced relation and comprise a first rib disposed between said first and second base sections, wherein said first rib comprises a first sidewall that extends away from said first base section, as well as a second sidewall that extends away from said second base section; and

a clamp mounted on said first rib and comprising:

a first clamping member that engages said first sidewall of said first rib and that also extends beyond said first rib;

a second clamping member that engages said second sidewall of said first rib and that also extends beyond said first rib, wherein said second clamping member is pivotable relative to first clamping member; and

a first fastener located beyond said first rib and associated with each of said first and second clamping members, wherein activation of said first fastener causes said second clamping member to pivot relative to said first clamping member such that said first and second clamping members each exert at least an inwardly-directed force on said first rib.

2. A clamp/panel assembly, as claimed in Claim 1, wherein:

said plurality of ribs are each hollow and of a trapezoidal-type.

3. A clamp/panel assembly, as claimed in Claim 1, wherein:

a first reference plane is associated with said plurality of base sections;

said first and second clamping members are disposed on opposite sides of a second reference plane that is perpendicular to said first reference plane and that extends along a length dimension of said first rib;

said first clamping member further comprises first, second and third sections, wherein said first section is disposed beyond said first rib and further is disposed at least generally parallel with said first reference plane, wherein said second section extends from said first section toward said first reference plane in a first orientation relative to said second reference plane and is also disposed beyond said first rib, and wherein said third section extends from said second section toward said first reference plane in a second orientation relative to said second reference plane and engages said first sidewall of said first rib, wherein said first and second orientations are different; and

said second clamping member further comprises fourth and fifth sections, wherein said fourth section is disposed beyond said first rib and extends toward said first reference plane in a third orientation relative to said second reference plane, and wherein said fifth section extends from said fourth section toward said first reference plane in a fourth orientation relative to said second reference plane and engages said second sidewall of said first rib, wherein said third and fourth orientations are different, and wherein said fourth and fifth sections of said second clamping member are at least generally a mirror image of said second and third sections of said first clamping member.

4. A clamp/panel assembly, as claimed in Claim 1, wherein:

said first clamping member comprises a recess that is concave and arcuately-shaped, and wherein said second clamping member comprises a first projection that is convex and arcuately-shaped, and further that is disposed in said recess of said first clamping member to provide a pivotal connection of said second clamping member to said first clamping member.

5. A clamp/panel assembly, as claimed in Claim 1, wherein:

said second sidewall comprises a second indentation on an exterior surface of said first rib, and wherein said second clamping member comprises a second head disposed in said second indentation.

6. A clamp/panel assembly, as claimed in Claim 5, wherein:

said first sidewall comprises a first indentation on said exterior surface of said first rib, and wherein said first clamping member comprises a first head disposed in said first indentation.

7. A clamp/panel assembly, as claimed in Claim 5, wherein:

said first sidewall is free of any indentations on said exterior surface of said first rib.

8. A clamp/panel assembly, as claimed in Claim 7, wherein:

said clamp further comprises a second fastener that extends through said first clamping member and through an aligned portion of said first sidewall of said first rib.

9. A clamp/panel assembly, as claimed in Claim 1, further comprising:

an attachment mounted on said first clamping member.

10. A clamp/panel assembly, as claimed in Claim 9, wherein:

said first clamping member comprises a threaded bore, wherein said clamp further comprises a first threaded fastener that extends through said attachment and at least into said threaded bore to mount said attachment to said first clamping member.

11. A clamp/panel assembly, as claimed in Claim 10, wherein:

said threaded bore extends completely through said first clamping member, wherein said first threaded fastener extends completely through said threaded bore, and wherein said first threaded fastener lacks a nut for retaining said first threaded fastener on said first clamping member.

12. A clamp/panel assembly, as claimed in Claim 1, wherein:

one of said first and second clamping members comprises a non-threaded bore, wherein the other of said first and second clamping members comprises a threaded bore, and wherein said first fastener extends through said non-threaded bore and at least into said threaded bore.

13. A clamp/panel assembly, as claimed in Claim 12, wherein:

said first fastener extends completely through each of said first and second clamping members, wherein said first fastener lacks a nut for retaining said first fastener relative to said first and second clamping members.

14. A clamp/panel assembly, as claimed in Claim 1, wherein:

one of said first and second clamping members comprises a non-threaded slot, wherein the other of said first and second clamping members comprises a threaded bore, and wherein said first fastener extends through said non-threaded slot and at least into said threaded bore.

15. A clamp/panel assembly, as claimed in Claim 1, further comprising:

an insert disposed within a hollow interior of said first rib, wherein said clamp is mounted on said first rib in overlying relation to said insert such that said first rib is disposed between said clamp and said insert.

16. A clamp/panel assembly, comprising:

a panel assembly comprising a plurality of interconnected panels comprising a plurality of base sections and a plurality of ribs, wherein said plurality of base sections comprises first and second base sections, wherein said plurality of ribs are disposed in spaced relation and comprise
 5 a first rib disposed between said first and second base sections, wherein said first rib comprises a first sidewall that extends away from said first base section, as well as a second sidewall that extends away from said second base section; and

a clamp mounted on said first rib and comprising:

a first clamping member that engages said first sidewall of said first rib and that
 10 also extends beyond said first rib, wherein said first clamping member comprises a recess that is concave and arcuately-shaped;

a second clamping member that engages said second sidewall of said first rib, that extends beyond said first rib, and that comprises a first projection that is convex and arcuately-shaped, and further that is disposed in said recess of said first clamping member; and

15 a first fastener located beyond said first rib and associated with each of said first and second clamping members, wherein activation of said first fastener causes said first and second clamping members to each exert at least an inwardly-directed force on said first rib.

17. A clamp/panel assembly, as claimed in Claim 16, wherein:

said plurality of ribs are each hollow and of a trapezoidal-type.

18. A clamp/panel assembly, as claimed in Claim 16, wherein:

a first reference plane is associated with said plurality of base sections,

said first and second first clamping members are disposed on opposite sides of a second reference plane that is perpendicular to said first reference plane and that extends along a length dimension of said first rib;

said first clamping member further comprises first, second and third sections, wherein said first section is disposed beyond said first rib and further is disposed at least generally parallel with said first reference plane, wherein said second section extends from said first section toward said first reference plane in a first orientation relative to said second reference plane and is also disposed beyond said first rib, and wherein said third section extends from said second section toward said first reference plane in a second orientation relative to said second reference plane and engages said first sidewall of said first rib, wherein said first and second orientations are different; and

said second clamping member further comprises fourth and fifth sections, wherein said fourth section is disposed beyond said first rib, comprises said first projection on a distal end of said fourth section, and extends toward said first reference plane in a third orientation relative to said second reference plane, and wherein said fifth section extends from said fourth section toward said first reference plane in a fourth orientation relative to said second reference plane and engages said second sidewall of said first rib, wherein said third and fourth orientations are different, wherein said fourth and fifth sections of said second clamping member are at least generally a mirror image of said second and third sections of said first clamping member.

19. A clamp/panel assembly, as claimed in Claim 16, wherein:

said second sidewall comprises a second indentation on an exterior surface of said first rib, and wherein said second clamping member comprises a second head disposed in said first indentation.

5 20. A clamp/panel assembly, as claimed in Claim 19, wherein:

said first sidewall comprises a first indentation on said exterior surface of said first rib, and wherein said first clamping member comprises a first head disposed in said first indentation.

21. A clamp/panel assembly, as claimed in Claim 19, wherein:

said first sidewall is free of any indentations on said exterior surface of said first rib.

10 22. A clamp/panel assembly, as claimed in Claim 21, wherein:

said clamp further comprises a second fastener that extends through said first clamping member and through an aligned portion of said first sidewall of said first rib.

23. A clamp/panel assembly, as claimed in Claim 16, further comprising:

an attachment mounted on said first clamping member.

15 24. A clamp/panel assembly, as claimed in Claim 23, wherein:

said first clamping member comprises a threaded bore, wherein said clamp further comprises a first threaded fastener that extends through said attachment and at least into said threaded bore to mount said attachment to said first clamping member.

25. A clamp/panel assembly, as claimed in Claim 24, wherein:

20 said threaded bore extends completely through said first clamping member, wherein said first threaded fastener extends completely through said threaded bore, and wherein said first threaded fastener lacks a nut for retaining said first threaded fastener on said first clamping member.

26. A clamp/panel assembly, as claimed in Claim 16, wherein:

one of said first and second clamping members comprises a non-threaded bore, wherein the other of said first and second clamping members comprises a threaded bore, and wherein said first fastener extends through said non-threaded bore and at least into said threaded bore.

5 27. A clamp/panel assembly, as claimed in Claim 26, wherein:

said first fastener extends completely through each of said first and second clamping members, wherein said first fastener lacks a nut for retaining said first fastener relative to said first and second clamping members.

28. A clamp/panel assembly, as claimed in Claim 16, wherein:

10 one of said first and second clamping members comprises a non-threaded slot, wherein the other of said first and second clamping members comprises a threaded bore, and wherein said first fastener extends through said non-threaded slot and at least into said threaded bore.

29. A clamp/panel assembly, as claimed in Claim 16, further comprising:

15 an insert disposed within a hollow interior of said first rib, wherein said clamp is mounted on said first rib in overlying relation to said insert such that said first rib is disposed between said clamp and said insert.

30. A clamp/panel assembly, as claimed in Claim 16, wherein:

said first and second clamping members are pivotally interconnected.

31. A clamp/panel assembly, comprising:

a panel assembly comprising a plurality of interconnected panels comprising a plurality of base sections and a plurality of ribs, wherein said plurality of base sections comprises first and second base sections, wherein said plurality of ribs are disposed in spaced relation and comprise
5 a first rib disposed between said first and second base sections, wherein said first rib comprises a first sidewall that extends away from said first base section, as well as a second sidewall that extends away from said second base section; and

a clamp mounted on said first rib and comprising:

a first clamping member that engages said first sidewall of said first rib, wherein
10 said first clamping member also extends beyond said first rib;

a second clamping member that engages said second sidewall of said first rib, wherein said second clamping member also extends beyond said first rib; and

a first fastener located beyond said first rib and associated with each of said first and second clamping members, wherein activation of said first fastener causes said first and
15 second clamping members to each exert at least an inwardly-directed force on said first rib, and wherein said first fastener lacks a nut for retaining said first fastener relative to each of said first and second clamping members.

32. A clamp/panel assembly, comprising:

a panel assembly comprising a plurality of interconnected panels comprising a plurality of base sections and a plurality of ribs each having a hollow interior;

an insert disposed within said hollow interior of a first rib of said plurality of ribs; and

5 a clamp mounted on said first rib in overlying relation to said insert such that said first rib is disposed between said clamp and said insert.

33. A clamp/panel assembly, as claimed in Claim 32, wherein said clamp comprises:

a first clamping member engaged with a first side of said first rib;

10 a second clamping member engaged with a second side of said first rib; and

a first fastener located beyond said first rib and associated with each of said first and second clamping members, wherein activation of said first fastener causes said first and second clamping members to each exert at least an inwardly-directed force on said first rib.

34. A clamp/panel assembly, as claimed in Claim 33, wherein:

15 activation of said first fastener causes said second clamping member to pivot relative to said first clamping member.

35. A clamp/panel assembly, as claimed in Claim 33, wherein:

said first clamping member comprises a recess that is concave and arcuately-shaped, and wherein said second clamping member comprises a first projection that is convex and arcuately-shaped, and further that is disposed in said recess of said first clamping member, wherein
20 activation of said first fastener causes said second clamping member to move relative to said first clamping member at least generally about said first projection.

36. A clamp/panel assembly, as claimed in Claim 33, wherein:

said first rib comprises at least one indentation on an exterior surface of said first rib, wherein said second clamping member comprises a second head disposed in said at least one indentation.

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37. A clamp/panel assembly, as claimed in Claim 33, wherein:

said first rib comprises first and second indentations on an exterior surface of said first rib and disposed on said first and second sides, respectively, of said first rib, wherein said first and second clamping members comprise first and second heads, respectively, disposed in said first and second indentations, respectively.

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38. A clamp/panel assembly, comprising:

a panel assembly comprising a plurality of interconnected panels comprising a plurality of base sections and a plurality of ribs, wherein said plurality of base sections comprises first and second base sections, wherein said plurality of ribs are disposed in spaced relation and comprise
5 a first rib disposed between said first and second base sections, wherein said first rib comprises a first sidewall that extends away from said first base section, as well as a second sidewall that extends away from said second base section and that is disposed in non-parallel relation with said first sidewall, wherein said second sidewall comprises a second indentation on an exterior surface of said first rib; and

10 a clamp mounted on said first rib and comprising a second head disposed in said second indentation.

39. A clamp/panel assembly, as claimed in Claim 38, wherein:

said first rib is hollow and of a trapezoidal-type.

40. A clamp/panel assembly, as claimed in Claim 38, wherein:

15 a first reference plane is associated with said plurality of base sections, and wherein said first rib comprises a top wall that interconnects said first and second sidewalls and that is disposed in spaced relation to said first and second base sections.

41. A clamp/panel assembly, as claimed in Claim 38, wherein:

said first sidewall comprises a first indentation on said exterior surface of said first rib,
20 wherein said clamp further comprises a first head disposed in said first indentation.

42. A clamp/panel assembly, as claimed in Claim 41, wherein:

said first and second heads are each convexly-shaped.

43. A clamp/panel assembly, as claimed in Claim 41, wherein said clamp further comprises:

a first clamping member comprising said first head;

a second clamping member comprising said second head, wherein said second
5 clamping member is a separate piece from said first clamping member; and

a first fastener located beyond said first rib and associated with each of said first and second clamping members, wherein activation of said first fastener causes said first and second clamping members to each exert at least an inwardly-directed force on said first rib.

44. A clamp/panel assembly, as claimed in Claim 43, wherein:

10 activation of said first fastener causes said second clamping member to pivot relative to said first clamping member.

45. A clamp/panel assembly, as claimed in Claim 43, wherein:

said first clamping member comprises a recess that is concave and arcuately-shaped, and wherein said second clamping member comprises a first projection that is convex and arcuately-
15 shaped, and further that is disposed in said recess of said first clamping member, wherein said activation of said first fastener causes said second clamping member to move relative to said first clamping member at least generally about said first projection.

46. A clamp/panel assembly, as claimed in Claim 38, wherein:

said clamp engages said first sidewall, and wherein said first sidewall is free of any
20 indentation on said exterior surface of said first rib.

47. A clamp/panel assembly, as claimed in Claim 38, wherein said clamp comprises:

a first clamping member engaged with said first sidewall of said first rib;

a second clamping member engaged with said second sidewall of said first rib,
5 comprising said second head, and being a separate piece from said first clamping member; and

a first fastener located beyond said first rib and engaged with each of said first and second clamping members, wherein activation of said first fastener causes said first and second clamping members to each exert at least an inwardly-directed force on said first rib.

48. A clamp/panel assembly, as claimed in Claim 47, wherein:

10 said clamp further comprises a second fastener that extends through said first clamping member and through an aligned portion of said first sidewall.